From:	Valerie Oster
To:	Andy Davis; Carl Stivers; Christine Hawley; David Ashton; Gene Revelas; James Peale; Jeff Peterson; Jerry George; John Toll; Keith Pine; Linda Baker; mlewis@newfields.com; Nancy Judd; Ray Walton; Sean Gormley; Walt Burt; hope.bruce@deq.state.or.us; Eric Blischke/R10/USEPA/US@EPA; Chip Humphrey/R10/USEPA/US@EPA; anderson.jim@deq.state.or.us; valerie.lee@eiltd.net; jean.lee@eiltd.net; Bob Wyatt; Fred Wolf; Jan Betz; Jim McKenna; Patty Dost (Schwabe); Rick Applegate; Valerie Oster
Subject:	FW: Notes from 11/29 Fate and Transport Model Meeting
Date:	11/30/2006 09:24 AM

Hi all -

Please see below from Carl. Also, I do not have an email address for Carrie Smith, so I would appreciate it if someone could please send me her email address and I will see that she gets this message.

thanks
valerie

Valerie Thompson Oster
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From: Carl Stivers
Sent: Thursday, November 30, 2006 8:43 AM
To: Valerie Oster
Subject: Notes from 11/29 Fate and Transport Model Meeting

Valerie -

Please forward this to the appropriate LWG and EPA groups. Thanks.

All -

Here are my notes on our progress from yesterday's meeting. These are not meeting minutes but try to capture highlights of agreements reached and action items.

1. It was agreed that some additional refinement of the abiotic F&T cells would be conducted by the agencies and they would provide a final suggested file showing these cells for LWG to review and accept. The EPA team will also provide a write up of how and why the boxes have the selected configurations. West (Ray Walton) will match these cells up to the grid in the EFDC model such that no EFDC cells are crossed (i.e., an integer number of EFDC cells are within each F&T cell).

2. Data will be transfered from the EFDC model to the F&T model using excel table(s). The EFDC output tables will include the integrated net 1 day fluxes of water and sediment for each face of each F&T cell as well as the average water volume present in each cell for each day. Sediment fluxes interfaces will also include the water/sediment bed interface. Sediment fluxes will not include bedload movement and will include the medium sand and smaller grain size categories (i.e., exluding coarse sand and larger). The table will show zero for negative fluxes so that only one net flux is shown for each interfaace. The exact format of the tables will be worked out iteratively. The first version provided by West will include a run using an average flow year of about 1 month for testing purposes.
3. The eventually modeled scenario (not the test run just mentioned above) will be for a 20 year period. The water and sediment fluxes will be determined through the EFDC model for five flow year types. These five types will be selected for each year in the F&T model based on a probability distribution of the historical occurrence of these conditions based on flow. Bruce Hope will supply the distribution details to West and Anchor so that West can select the appropriate flow years for each of the five flow types.
4. The abiotic F&T model will be recoded for a few processes so that it can simply accept inputs from the EFDC model runs rather than calculate those fluxes internally. Carrie Smith and Carl Stivers will work on defining these necessary changes. Carl also indicated that he has in the past suggested some potential parameterization data source changes and he will also discuss these with Carrie for EPA consideration. Any suggested changes will be vetted to the whole team for review before being executed.
5. Additional input/outputs to the abiotic F&T model were discussed. It was agreed that contaminated groundwater as a separate input would not be added, although the report will discuss the reasons for considering this input minor (at the scale considered by the model) and justify this decision clearly. Clean regional groundwater flow impacts to sediment bed chemical flux to the water column will be considered by adding this factor to the current diffusive flux term in the model. Essentially, the value for this dissolved flux parameter will be increased so that it accounts for the sum of diffusive and advective (groundwater driven) dissolved chemical flux. It was also agreed that stormwater inputs should be separated into solids input to the sediment bed and dissolved inputs to the water column. This will require a minor change to the input structure of the F&T model.
6. The Food Web Model (FWM) portion will be based on the version of the FWM structure agreed to previously this year for the Round 2 Report with the addition of tissue chemical mass tracking elements and tissue loss rate constant (or equation) that Bruce Hope has added to make the FWM dyanamic (rather than steady state). Bruce provided this additional related code during the meeting. The LWG has been working on refined model parameter values for the Round 2 Report and will discuss internally a means for providing these refined values as soon as possible to the EPA team. Discussions will be needed at that time to determine the "best" parameter values for the objectives of the Hybrid Model approach, which may vary from the parameter values used for the purposes of the Round 2 Report. In addition, the EPA team had previously suggested a change to the FWM water bioavailability factor and EPA direction on this matter is needed to finalize the estimation of this parameter.
7. The transfer of data from the abiotic F&T model to the FWM will be accomplished as one cut and past of the complete 20 year run from a Stella output table to excel input file. Since Bruce has been doing this already, the exact formats of these exchange tables have all been worked out.
8. Per item 2 above, it was agreed that the best time step for the F&T model (including the FWM) is 1 day.
9. Regarding who would run the model, it was agreed that LWG and EPA would work jointly to define the fastest way to proceed with any particular step in the process depending on staff availability and expertise. In general Carl Stivers and Carrie Smith will be the primary points of contact for information exchange between the two groups so when any F&T/FWM model changes (after they are agreed to) are made both groups have the exact same model. Carl and Carrie should be copied on all email exchanges in these matters. Once a change is agreed to, Carrie and Carl will discuss how best and most quickly to execute the change and any related subsequent F&T/FWM model runs. West will conduct all EFDC model runs.

One item that was not discussed is what chemicals will be modeled. I'd suggest that since this effort through early next year is focused on constructing the model to identify data gaps, that one chemical is sufficient for this purpose. Bruce has been using a PCB congener, I believe. Given that PCBs are expected to be a project "risk driver", I think continuing on this approach for model development is appropriate. Please reply to all if there are significantly varying opinions on this.

Action Items:

1. Ray Walton will provide a file of the EFDC boxes to Carrie Smith on 11/30.
2. Carrie Smith will provide a file of refined F&T boxes to Ray Walton by 12/7.
3. Ray Walton will provide first example EFDC model output tables by 12/21.
4. Bruce Hope to provide five flow year type distribution to Ray Walton and Carl Stivers by 11/30.
5. Carrie Smith provided the new FWM to Nancy Judd at yesterday's meeting.
6. Eric Blischke will contact Burt Shepard to resolve the FWM bioavailability factor issue and reply to Carl and Nancy with direction by 12/7.
7. Carrie and Carl will discuss and execute F&T model recodes between now and 12/21.
8. Nancy Judd will review the new FWM and verify she can replicate functioning and model data transfer per above agreements by 12/14.
9. Carrie and Carl will complete example model run(s) using the one month EFDC output from 12/21 to 1/4. [After discussing holiday schedules, I suggest a more realistic deadline for this is 1/11 and this should not impact the overall schedule. Please let me know if anyone objects.]
10. Nancy Judd will provide updated parameter values being used for the Round 2 Report objectives to Bruce and EPA team as soon as possible. LWG will need to discuss internally appropriate schedule for providing this information and will provide a goal date ASAP.
11. Carl will also work on a suggested outline for the modeling report through this period with goal distribution data on or around 1/11.

At this stage (as of 1/11), we should be in a position to execute a full 20 year run of the model. I think it is likely there will be a need for a meeting at about this time to work out any final details. Also, at that point, the exact task at hand will be more clear and we should be able to define the time period needed for both EFDC model and the F&T/FWM model runs. The overall revised schedule discussed would have all model runs and draft reporting completed in early May, which in theory should be plenty of time for both modeling and report writing.

Thanks to all for a very productive meeting.

Carl